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APPENDIX [in Volume II]

Appendix M	Roadway Analyses
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8.10 TRAFFIC AND TRANSPORTATION

This section assesses transportation impacts associated with the construction and operation of the proposed Colusa Power Plant project. The analysis primarily examines impacts on roadway levels of service expected during both construction and operation of the plant. Additional transportation factors examined in this section include parking, pedestrian and bicyclist impacts, safety, goods movement, and any potential impacts to air, rail, and waterborne transportation networks. This section also identifies and reviews applicable laws, regulations and ordinances relevant to traffic and transportation activities.

Information sources include traffic counts provided by Colusa County staff, data provided by the California Department of Transportation (Caltrans), field observations, and communications with Colusa County staff. Kolve Engineering performed project area reconnaissance in March 2001 to document roadway characteristics, identify physical constraints, and assess general traffic conditions.

8.10.1 Affected Environment

8.10.1.1 Existing Transportation Facilities

8.10.1.1.1 Regional Roadway Facilities

The proposed project lies in a rural agricultural area of Colusa County approximately 4 miles west of the I-5 transportation corridor (Figure 8.10-1). I-5 runs north and south through central California. Near the project site it connects the towns of Williams, Maxwell, and Willows, and Sacramento which is approximately 75 miles to the south. Colusa, the county seat, is located approximately 13 miles to the east.

I-5 is comprised of four lanes of mixed flow traffic in the area near the project. Access to the Colusa Power Plant from I-5 northbound and southbound is by the Delevan Road interchange. According to traffic counts conducted by Caltrans in 1999, I-5 carries approximately 24,500 daily and 2,550 peak hour two-way trips north of the Delevan Road interchange and 25,000 daily and 2,650 peak hour two-way trips south of the Delevan Road interchange.

8.10.1.1.2 Local Roadway Facilities

Local roadways that provide access to and from the project site and I-5 are Delevan Road, McDermott Road, and Dirks Road. The county currently has no weight or loading limitations on the three local roadways. These roadways are briefly described below. Figure 8.10-2 shows the local roadway network in the vicinity of the Colusa Power Plant.

Delevan Road

Delevan Road is a two-lane roadway with one travel lane in each direction and functions as the principal east-west roadway in the study area, extending east from Four Mile Road to McDermott Road. It curves to a north-south direction after McDermott Road and ends in the Colusa-Glenn County limit. It carries 300 to 348 vehicles per day (Colusa County, 2000). It was assumed that 10 percent of the daily volume occurs in the peak hour.

McDermott Road

McDermott Road is a two-lane roadway that parallels I-5 running from Maxwell Road past the Colusa-Glenn County line to Road 68 in Glenn County. It is a paved roadway between Dirks Road and Delevan Road and between the Colusa-Glenn County line and Road 68. Within the project site vicinity

McDermott Road (Delevan Road to Dirks Road) carries 168 vehicles per day. It was assumed that 10 percent of the daily volume would occur in the peak hour.

Dirks Road

Dirks Road is a short two-lane, east-west roadway that connects McDermott with Delevan Road. The portion of Dirks Road maintained by the County ends at Delevan Road and a paved private road continues to the project site. No daily traffic data were available for Dirks Road; however, traffic is believed to be less than the traffic on Delevan or McDermott roads.

8.10.1.1.3 Existing Roadway Level of Service

Table 8.10-1 provides the classification, along with the current daily and peak hour traffic volumes, for the local and regional roadways in the study area. A Level of Service (LOS) analysis was completed to assess roadway operational performance based on existing and future traffic conditions. LOS is identified through a letter designation, varying from LOS A (less than a 30 percent time delay for local roads or less than 10 passenger cars per mile per lane for a freeway) to LOS F as described in Tables 8.10-2 and 8.10-3. Typically, LOS E represents the worst service level that is acceptable during peak hours.

Delevan, McDermott, and Dirks roads all currently operate at LOS A. Each of these roads currently has a very low traffic volume, less than 35 vehicles during the peak hour; a two-lane road can accommodate up to 1,000 vehicles an hour at an acceptable service level (LOS D or better). I-5 currently operates at LOS B during the peak hour in both the north and south directions of the Delevan Road interchange.

8.10.1.1.4 Other Transportation Elements

Parking

Street parking is not allowed on any local roads near the project site. Onsite parking will be provided for staff and construction workers within the project site.

Public Transportation

Colusa County does not currently provide public transportation in the project area.

Bicycle and Pedestrian Circulation

There are no designated bicycle routes or pedestrian trails in Colusa County. None of the roadways described above have sidewalks.

Airports

The Glenn County Airport is located approximately 8 miles north of the proposed project site on I-5. The Colusa County Airport is approximately 20 miles south via I-5 and State Highway 20. Sacramento International Airport is 65 miles south via I-5.

Safety

The Colusa Department of Public Works provided accident data for the past six years at the studied roadways and intersections. Crashes on county roadways are reported as the total number of accidents by severity and not as accident rates, because of the very low traffic volumes. In the past six years, there was one property-damage-only crash on McDermott Road, and one injury crash at the McDermott Road/Dirks Road intersection. I-5 accident data were collected for the past three years (1998-2000) and are reported

by Caltrans as crashes per million vehicle miles (crashes/MVM). Table 8.10-4 summarizes crash information in the study area.

Goods Movement

Freight Rail Service: A rail line runs parallel to I-5 approximately 4 miles east of the freeway. Union Pacific Railroad owns the rail line but it is operated by the California Northern Railroad. The main roadbed and rails appear to be in good condition — no problems are evident visually. The railroad is currently in use. It would be used to transport construction materials and could also be used to transport operating materials for the project in the future.

Truck Access: The largely agricultural land uses near the Colusa Power Plant generate truck traffic, although no designated truck routes exist near the project vicinity. Truck traffic from the power plant would access the project site from I-5 by heading west on Delevan Road, turning right (north) on McDermott Road, and then turning west on Dirks Road.

8.10.1.2 Planned County Transportation Improvements

Colusa County has no currently planned improvements within the immediate vicinity of the power plant.

8.10.1.3 Planned Project Improvements

The following three roadway improvements will be completed by Reliant Energy in conjunction with the construction and operation of the Colusa Power Plant:

- Teresa Creek Bridge (5/8 mile north of Delevan on McDermott) is currently not adequate to accommodate heavy construction truck traffic; therefore, it will be replaced.
- The turning radius at the Delevan Road/McDermott Road intersection is currently not adequate to accommodate the turning movements of construction trucks; therefore, additional gravel will be placed on the northeast and southeast corner to increase the turning radius.
- County and private access roads used by project traffic to travel between I-5 and the project will be repaved following construction.

8.10.2 Environmental Consequences

This subsection discusses potential transportation-related impacts from the construction and operation of the proposed project.

8.10.2.1 Thresholds of Significance

Significance criteria were developed based upon Appendix G of the CEQA *Guidelines*, which identifies potentially significant project impacts. A significant traffic-related project impact would occur if the project significantly changed the operating conditions on the surrounding roadway network. Roadway section LOS analysis was conducted to assess operational performance of the roads during construction and operation of the project. For LOS, the applicable significance threshold is a degradation in level of service from A, B, C, or D to E or F. As a result of the LOS analysis, and the finding that the project would impose relatively few vehicle-trips, other transportation elements were examined qualitatively.

Significance issues for the other transportation elements include:

- **Additional Vehicular Traffic:** would the additional traffic generated by the proposed project adversely affect operating conditions (i.e., LOS) on local and regional roadways.
- **Public Transit:** would the additional traffic generated by the proposed project impede public transit operations in the vicinity of the project.
- **Bicycle and Pedestrian Circulation:** would the additional traffic generated by the proposed project obstruct bicycle and pedestrian access to and from the project site or along adjacent bicycle and pedestrian routes.
- **Parking Facilities:** would the additional traffic generated by the proposed project consume limited parking in proximity to the project site.
- **Goods Movement:** would the additional traffic generated by the proposed project hinder goods movement along local and regional roadways.
- **Safety:** would the traffic generated by the proposed project impose any safety concerns, such as a significant increase in crashes.
- **Air, Rail, and Waterborne Traffic:** would the traffic generated by the proposed project interfere with air, rail, or waterborne traffic, or access to these transportation modes.

8.10.2.2 Construction Impacts

Construction Activities and Traffic Forecast

Weekday traffic operations were evaluated for the local roadway network adjacent to the proposed project during construction. Onsite construction of the project is expected to take place from April 2002 to February 2004, a total of 22 months as shown in Figure 3.6-1. The schedule has been estimated on a single-shift, 10 hours/day and 55 hours/week. However, occasional use of a second shift may be necessary to make up schedule deficiencies or to complete critical construction activities. During the startup and testing phase of the project, some activities may continue 24 hours per day, 7 days per week.

The onsite workforce will consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The onsite workforce is expected to reach its peak of 641 individuals during the 15th month of construction.

For the proposed project, trip generation figures were provided by Reliant Energy and their engineer, Duke/Fluor Daniel, based upon observed trip generation for similar projects at comparable facilities. These data represent the average one-way and maximum number of daily trips. In order to provide a conservative estimate of the potential traffic impacts associated with the proposed project, the maximum number of one-way daily trips was used as the basis for the analysis.

Estimates of the average and peak construction traffic during the onsite construction period are provided in Table 8.10-9. It is estimated that part of the workforce will carpool and the average vehicle occupancy will be 1.5 persons per vehicle. During the peak month, the estimated number of construction staff (passenger) round trips per day is 427 ($641 \div 1.5 = 427$). The greatest number of truck trips expected during construction of the project is 29 in September 2003. However, only 14 daily truck trips are anticipated in the peak construction month. Truck deliveries will normally be on weekdays between 7:00 a.m. and 5:00 p.m.

The impact analysis examined the worst-case scenario of 427 passenger round trips per day during peak construction months (estimated to be 4 to 6 months), plus 14 delivery truck trips per day, for a total of 441 round trips per day.

Traffic conditions (LOS) are evaluated in this study using the Highway Capacity Software (HCS 3), which incorporates the methodology of the Transportation Research Board's 1994 *Highway Capacity Manual*. This program assigns a LOS designation based upon Percent Time Delay (for local roadways) and Maximum Density (for freeways).

This study assumed that 70 percent of the 427 round trips generated by construction personnel at the Colusa Power Plant will arrive during the morning peak hour, and depart during the evening peak hour at the end of the day shift. Because delivery vehicles and heavy trucks would likely arrive and depart throughout the day, 20 percent of the one-way daily truck trips were assumed to occur during the peak hour. These assumptions allow for a judicious worst-case assessment of the potential project-related traffic impacts. Trips generated by the Colusa Power Plant are presented in Table 8.10-10.

Trip Distribution

Based upon information developed for Section 8.8, Socioeconomics, the distribution of construction workers is estimated as follows: 5 percent from Glenn County/Colusa County, 45 percent from Greater Sacramento (counties of Placer, El Dorado, Sutter, Yuba, and Yolo), and 50 percent from the East Bay. Ninety-five percent of the construction workers will therefore be heading north on I-5, and 5 percent will be heading south on I-5 to access the Colusa Power Plant. I-5 volumes south of Delevan Road are slightly higher than those north of Delevan Road; therefore, traffic conditions on I-5 have been analyzed using existing and future volumes south of Delevan Road.

Future Level of Service During Project Construction

Table 8.10-11 summarizes the existing and future Level of Service on key roadways in the study area. The construction traffic resulting from the proposed project is expected to change the peak hour operating conditions on Delevan and McDermott roads from the existing LOS A to LOS B. This change would occur only during the peak construction months, which are scheduled to last between 4 and 6 months. Afterwards, the traffic LOS is expected to return to LOS A when the Colusa Power Plant is operating. Detailed LOS worksheets are included in Appendix M. During the same peak construction months, traffic on I-5 south of Delevan Road is expected to continue to operate at LOS B during the peak periods.

The analysis indicates that the proposed project would not cause a significant LOS deterioration at the studied road segments. The anticipated Level of Service would remain good for all roadway sections with the addition of anticipated project-related construction traffic, with all studied road sections continuing to operate at LOS B or better.

The roadways providing access to the Colusa Power Plant contain adequate capacity to accommodate the additional vehicle trips expected during construction. Impacts during construction are therefore not expected to be significant. However, the existing Teresa Creek Bridge on McDermott Road and the turning radius at the Delevan Road/McDermott Road intersection are not adequate to accommodate heavy construction truck traffic. Therefore, the Teresa Creek Bridge needs to be replaced and additional gravel will be placed on the northeast and southeast corners of the Delevan Road/McDermott Road intersection to properly accommodate project-related construction traffic. Reliant Energy plans to complete these improvements as part of the project.

Teresa Creek Bridge (5/8 mile north of Delevan on McDermott) is currently not adequate to accommodate heavy construction truck traffic, therefore, it will be replaced. During reconstruction, a

temporary 14-foot-wide bridge and detour road would be installed immediately downstream of the existing bridge, allowing traffic to pass through this area.

If the temporary bridge were not constructed, traffic would be detoured.

The bridge will most likely be replaced during the first three months of power plant construction. When the bridge is closed during its reconstruction, a detour route will be required. The detour route would be as follows: vehicles would travel eastbound on Delevan Road, northbound on I-5 or on Old 99W, and then travel west on Road 68 in Glenn County, southbound on McDermott Road, and westbound on Dirks Road. Road 68 is a paved two-lane roadway with one travel lane in each direction. Old 99W is a paved two-lane state highway that runs parallel to I-5. Table 8.10-5 provides the classification, along with the current daily and peak hour traffic volumes for the local and regional roadways in the study area. Table 8.10-6 provides the power plant construction trip generation during the closure of Teresa Creek Bridge. The analysis was conducted for the third month since the number of construction staff round trips per day in addition to the number of daily truck deliveries was greatest during this month.

According to the Colusa County Department of Public Works, three-fourths of the traffic that would be detoured if Teresa Creek Bridge is closed would be farm equipment that would most likely use Old 99W rather than I-5. Peak hour traffic volumes on each roadway during the closure of Teresa Creek Bridge and construction of the power plant are summarized in Table 8.10-7. Level of Service (LOS) analysis was completed to assess roadway operational performance based on existing and future traffic conditions during the detour. The analysis indicates that the proposed detour route would not cause a LOS deterioration on any of the studied road segments. McDermott Road, Delevan Road, Road 68, and Old 99W would remain at LOS A with the addition of anticipated project-related construction traffic and detoured traffic. I-5 south of Road 68 is expected to continue operating at LOS B. Table 8.10-8 summarizes the existing and future LOS on key roadways in the study area. The detailed LOS worksheets are included in Appendix M.

Parking Facilities

The Colusa Power Plant contains adequate onsite space to accommodate 441 passenger and truck vehicles during peak construction months. No significant parking impacts are expected.

Public Transportation

Colusa County does not provide public transportation to the project site. Therefore, the proposed project will not cause any impacts to public transportation.

Bicycle and Pedestrian Circulation

Construction-related traffic would have no impact on local pedestrian or bicycle access because there are no designated bicycle routes or pedestrian trails in Colusa County, and none of the roadways described above have sidewalks.

Goods Movement

The temporary construction-related activities would not significantly impact goods movement on the adjacent railroad or on I-5 in the project area. Both I-5 and the railroad spur west of the project site have adequate capacity to accommodate delivery of goods and equipment to the project.

Safety

The roadways in the vicinity of the proposed project site have adequate sight distance, and accident counts and accidents rates on the nearby roadways are historically very low (2 crashes in the last six years on the County roads studied, no crashes on the I-5 Delevan Road ramps, and 0.22 crashes per million vehicle miles on average for the I-5 freeway segments). In addition, the project site is located in an agricultural area, with no neighboring commercial/retail businesses or residences that might be impacted by a traffic accident. The increase in construction traffic is not expected to significantly increase the risk of traffic accidents in the area.

Air, Rail, and Waterborne Traffic

The proposed project would have no adverse impacts on air, rail, or waterborne traffic.

8.10.2.3 Operation Impacts

Plant operations will require approximately 22 permanent workers. Under a worse-case scenario, which would assume no carpooling, these workers would generate 22 round trips daily during operations. The plant is scheduled to operate 7 days a week, 365 days a year, and therefore traffic trips would be consistent throughout the year. Plant operations would also generate approximately 3 delivery truck trips a day. This total number of project trips would not change the current LOS of A on Delevan or McDermott roads in the project area or the assumed LOS A on Dirks Road, or the LOS B on I-5; therefore, no significant traffic impacts are anticipated.

8.10.2.4 Hazardous Materials Transport

Construction of the proposed project would generate hazardous wastes consisting primarily of waste oil and oil filters, paint, solvents, and spent welding materials. Operation of the proposed project would result in the generation of additional wastes, including waste crankcase oil, oily rags and absorbent, spent catalyst, and HSRG cleaning wastewater.

It is estimated that approximately 5 to 7 truck trips per month would be required for transport of hazardous waste materials during normal plant operations (this number of trips is included in the calculation of truck trips in the above sections). A licensed hazardous waste transporter would move those materials that require off-site removal to a hazardous waste landfill that is able to accommodate hazardous wastes of the appropriate class. Access by waste haulers to and from the Colusa Power Plant is via I-5 to Delevan Road, north on McDermott Road and left (west) on Dirks Road into the plant site. I-5 provides access to the following hazardous waste facilities that will potentially be used:

- Class 1 Hazardous waste — Safety Kleen (West Sacramento)
- Class 2 Non-hazardous waste — B&J Landfill (Vacaville) or Ostrom Road Sanitary Landfill (Wheatland)
- Class 3 Non-hazardous waste — Yolo County Landfill (Woodland) or Anderson Solid Waste (Anderson)

I-5, which is the major highway that would be used to carry hazardous wastes from the Colusa Power Plant to the appropriate landfills, contains adequate capacity to accommodate these vehicle trips.

8.10.3 Cumulative Impacts

The construction of the Colusa Power Plant would add approximately 441 daily round trips during peak construction, with 302 vehicle and truck trips anticipated during the peak hour. Each of the roadway segments in the study area is expected to operate at LOS B, and these roadways could accommodate higher volumes per day, including accommodation of the 15 vehicles associated with the Wild Goose proposed underground natural gas storage project construction without further reducing the level of service. Therefore, cumulative construction impacts are not considered significant. The permanent addition of 25 daily round trips would also not cause any significant cumulative operational traffic impacts.

8.10.4 Mitigation Measures

No significant LOS impacts are anticipated from the additional traffic generated by the construction and operation of the proposed power plant; therefore, no mitigation is required.

8.10.5 Laws, Ordinances, Regulations, and Standards

Table 8.10-12 summarizes applicable traffic and transportation laws, ordinances, regulations, and standards for the proposed project. The proposed project area lies within the territory of Caltrans, District 3, which has jurisdiction over the portion of I-5 described in Section 8.10.1.1.1. Colusa County has jurisdiction over the local roadways described in Section 8.10.1.1.2. These ordinances do not apply to the private section of Dirks Road.

Colusa County does not currently have a General Plan that contains detailed requirements for evaluation of roadway operation and performance. *Caltrans Standard Plans* provides guidelines for traffic control and lane closures for construction work that should be followed.

To comply with the hazardous materials regulations, the project sponsor must follow the guidelines set forth in Section 8.10.2.4, Hazardous Materials Transport, which include rules from the Federal Motor Carrier Safety Administration.

Standards for the transport of hazardous materials are contained in the Code of Federal Regulations, Title 49 and enforced by the U.S. Department of Transportation. Additionally, the State of California has promulgated rules for hazardous waste transport that can be found in the California Code of Regulations, Title 26. Hauling would be carried out in accordance with state, and federal regulations that include the Resource Conservation and Recovery Act (42 U.S. Code 6901 et seq.) and the California Integrated Waste Management Act (Public Resources Code Sections 40000 et seq.). Additional regulations for the transportation of hazardous materials are outlined in the California Vehicle Code (Sections 2500-505, 12804-804.5, 31300, 3400, and 34500-501). The two state agencies with primary responsibility for enforcing federal and state regulations governing the transportation of hazardous wastes are the California Highway Patrol and Caltrans. Colusa County does not currently have any local hazardous materials hauling regulations. In addition, the federal government prescribes regulations for transporting hazardous materials. These regulations are described in the Code of Federal Regulations, Number 49, Part 171. These laws and ordinances place requirements on various aspects of hazardous waste hauling, from materials handling to vehicle signs, to ensure public safety. Transporting/handling of chemicals and wastes are discussed in the Hazardous Materials Management Section, including the transport of ammonia (for a more detailed description of hazardous waste regulations, see Table 8.13-5).

8.10.6 Involved Agencies and Agency Contacts

The proposed project lies in proximity to roadways operated by Colusa County. The relevant agencies and appropriate contacts are shown below.

Issue	Agency/Address	Contact/Title	Telephone
Local Roadway Improvements	Colusa County, Department of Public Works 1215 Market Street Colusa, CA 95932	Jon Wrysinski, Assistant Director	(530) 458-0466
Local Circulation Plans and Policies	Colusa County, Department of Planning and Building 200-12 th Street Colusa, CA 95932	David Kelley, Director	(530) 458-0480
Hazardous Materials Transport	Federal Motor Carrier Safety Administration 980 – 9 th Street, Suite 450 Sacramento, CA 95814	Glenn Beck, Operations Supervisor	(916) 498-5050
I-5 Traffic	California Department of Transportation 703 B Street Marysville, CA 95901	Michael Forga, Chief, Office of Special Funded Projects	(530) 741-5456

8.10.7 Permits Required and Permit Schedule

Traffic studies for projects in Colusa County require consultation with the Department of Public Works to comply with their traffic analysis requirements. The short duration of the construction, in conjunction with the permanent addition of 25 daily round trips, impose such an insignificant addition to existing traffic levels that these requirements are not entirely applicable to this project. However, these issues require consultation with Department of Public Works staff.

The relevant permits required for work performed within County Roads in Colusa County are identified below.

Responsible Agency	Permit/Approval	Schedule
Colusa County, Department of Public Works	Land Grading Permit	7 days
Colusa County, Department of Public Works	Encroachment Permit	7 days

8.10.8 References

California Resources Agency. 1999. CEQA: The California Environmental Quality Act – *Statutes and Guidelines*. Amended March 29, 1999.

CFR (*Code of Federal Regulations*). 1998. 49, *Transportation, Parts 100 to 185*. Office of the Federal Register, National Archives and Records Administration. Revised, October 1, 1998.

Colusa County. 2000. Department of Public Works, Traffic Counts.

Caltrans (State of California, Department of Transportation, District 3). 2001. *Traffic and Vehicle Systems Data Unit*.

Caltrans (State of California, Department of Transportation, District 3). 1999. *Traffic Volumes on California State Highways*.

Transportation Research Board. 1994. *Highway Capacity Manual*, Special Report 209. Updated Third Edition. October 1994.

Table 8.10-1 Existing Traffic Volumes in Proximity to the Colusa Power Plant			
Name	Classification	Daily Traffic Volume	Peak Hour Traffic Volume
Local Roadways^a			
Delevan Road	County Road	348	35 ^b
McDermott Road	County Road	168	17 ^b
Dirks Road	County Road	NA	NA
Regional Roadways^c			
Interstate 5 (North of Delevan Road)	Freeway	24,500	2,550
Interstate 5 (South of Delevan Road)	Freeway	25,000	2,650
Notes: ^a Source: Colusa Public Works Department, 2000. ^b Assumes that 10 percent of the daily volume would occur in the peak hour. ^c Source: Caltrans, 1999. NA – not available			

Table 8.10-2 Level of Service Designations (Local Roadways)	
Level of Service	Percent Time Delay
A	≤ 30
B	≤ 45
C	≤ 60
D	≤ 75
E	> 75
F	100
Source: <i>Highway Capacity Manual</i> , Special Report 209, Transportation Research Board, 1994.	

Table 8.10-3 Level of Service Designations (Freeways)	
Level of Service	Maximum Density (Pc/Mi/Ln) ^a
A	10.0
B	16.0
C	24.0
D	32.0
E	36.7/39.7
F	Varies
Source: <i>Highway Capacity Manual</i> , Special Report 209, Transportation Research Board, 1994. Note: ^a Passenger Cars per Mile per Lane.	

Table 8.10-4 Crash Information in the Study Area	
Location	Number of Crashes in Past Six Years^a
Local Roads	
McDermott Road	1 Property Damage (1998)
McDermott Road and Dirks Road	1 Injury (1999)
Freeways	Crashes per Million Vehicle-Miles^b (1998-2000)
I-5 (North Maxwell-Delevan Road)	0.16
I-5 (Delevan Road-Colusa County Limit)	0.28
I-5 Northbound Offramp	0.00
I-5 Northbound Onramp	0.00
I-5 Southbound Offramp	0.00
I-5 Southbound Onramp	0.00
Notes: ^a Source: Colusa County, 2001 ^b Source: Caltrans, 2001	

Table 8.10-5 Characteristics of Roadways Used for Detour			
Name	Classifications	Daily Bidirectional Traffic Volume	Peak Hour Traffic Volume
Local Roadways			
Delevan Road	Colusa County Road	348 ^a	35 ^b
Road 68	Glenn County Road	77 ^c	11 ^c
McDermott Road, north of Teresa Creek Bridge	Glenn & Colusa County Road	44 ^c	5 ^c
Old 99W	Glenn County Road	904 ^c	49 ^c
Regional Roadways			
Interstate 5 (North of Road 68) ^d	Freeway	23,500	2,500 ^e
Interstate 5 (South of Road 68) ^d	Freeway	24,500	2,550 ^e
Notes: ^a Source: Colusa Public Works Department, 2000. ^b Assumed that 10% of the daily volume would occur in the peak hour. ^c Source: Glenn County Public Works Department, 2001. ^d Source: Caltrans, 1999 ^e Two-way peak hour traffic volume			

Table 8.10-6 Colusa Power Plant Construction Trip Generation During Roadway Detour Option		
Vehicle Type	One-Way Peak^a Daily Trips	Peak Hour Trips
Construction Personnel ^b	64	45 ^d
Construction Delivery Trucks ^c	20	4 ^e
Construction Total	84	49
Source: Reliant Energy, 2001 Notes: ^a "Peak" refers to the scheduled peak construction month (month 15). Peak workforce during this month is expected to be 96 persons. ^b Assumes that part of the work force will carpool (1.5 persons per vehicle) ^c Includes heavy vehicles ^d Assumes that 70% of workers will arrive and depart in the morning and evening peak hours, respectively. ^e Assumes that approximately 20% of the delivery trucks will arrive in the peak period.		

Table 8.10-7 Peak Hour Traffic Volumes During the Roadway Detour Option and With Colusa Power Plant Construction Traffic				
Name	Existing Traffic Volumes	Additional Traffic Volumes Due to Detour	Colusa Power Plant Construction Traffic Volumes	Total Traffic Volumes
Local Roadways				
Delevan Road	35	17 ^a	0	52
Road 68	11	17 ^a	49	77
McDermott Road North of Dirks Road	5	17 ^a	49	71
Old 99W	49	13 ^b	0	62
Regional Roadway				
Interstate 5 (South of Road 68)	2,550	4 ^b	47	1,581 ^c
Notes: ^a The existing 168 daily vehicles on McDermott Road south of the bridge would be detoured to Delevan Road. It was assumed that 10 percent of the daily volume would occur in the peak hour. ^b Colusa County Department of Public Works estimated that ¾ of the existing 168 daily vehicles on McDermott Road would use Old 99W and ¼ would use I-5. It was assumed that 10 percent of the daily volume would occur in the peak hour. ^c The existing 2,550 daily vehicles on I-5 is a two-way volume. A 60/40 split was assumed with 60 percent of the traffic traveling in the peak direction ($0.6 \times 2,550 + 4 + 47 = 1,581$).				

Table 8.10-8 Roadway Level of Service Summary for Detour Route				
Roadway	Existing Conditions		Existing Conditions Plus Project Construction Traffic and Detoured Traffic	
	LOS^a		LOS^b	
Delevan Road	A		A	
Road 68	A		A	
McDermott Road North of Dirks Road	A		A	
Old 99W	A		A	
I-5 South of Road 68	B	12.7 ^b	B	13.1 ^b
Notes: ^a LOS = Level of Service ^b Passenger Cars per Mile per Lane				

Table 8.10-9 Average and Peak Daily Construction Traffic		
Vehicle Type	Average Daily Round Trips	Peak Daily Round Trips^b
Construction Worker Passenger Vehicles ^a	206	427
Delivery Trucks (including heavy trucks)	15	14
Total	221	441
Notes: ^a Assumes that part of the workforce will carpool (1.5 persons per vehicle). ^b "Peak" refers to the scheduled peak construction month. The peak workforce during this month is expected to be 641 persons.		

Table 8.10-10 Colusa Power Plant Vehicle Trip Generation		
Vehicle Type	One-Way Peak^a Daily Trips	Peak Hour Trips
Construction Personnel ^b	427	299 ^c
Construction Delivery Trucks ^d	14	3 ^e
Construction Total	441	302
Power Plant Personnel	22	15 ^c
Operations Delivery Trucks ^d	3	1 ^e
Operations Total	25	16
Source: Reliant Energy, 2001 Notes: ^a "Peak" refers to the scheduled peak construction month. Peak workforce during this month is expected to be 641 persons. ^b Assumes that part of the work force will carpool (1.5 persons per vehicle) ^c Assumes that 70 percent of workers will arrive and depart in the morning and evening peak hours, respectively. ^d Includes heavy vehicles ^e Assumes that approximately 20 percent of the delivery trucks will arrive in the peak period.		

Table 8.10-11 Roadway Level of Service Summary						
Roadway	Existing Conditions		Existing Conditions Plus Project Construction Traffic		Existing Conditions Plus Operation Traffic	
	LOS		LOS		LOS	
Delevan Road	A		B		A	
McDermott Road	A		B		A	
Dirks Road ^a	A		B		A	
I-5 South of Delevan Road	B	13.2 ^b	B	15.6 ^b	B	13.3 ^b
Notes: ^a Assumed the LOS of Dirks Road is similar to that of Delevan and McDermott roads because no traffic data was available, but traffic is believed to be less than that of Delevan or McDermott roads ^b Passenger Cars per Mile per Lane LOS = Level of Service						

Table 8.10-12 Applicable Traffic and Transportation Laws, Ordinances, Regulations, and Standards			
Laws, Ordinances, Regulations, and Standards	Applicability	Administering Agency	AFC Section
Federal Hazardous Materials Regulations	Transporting Hazardous Materials	Federal Motor Carrier Safety Administration	Section 8.10.2.4
State Caltrans Standard Plans	Traffic Control/ Lane Closures	Caltrans	Section 8.10.5
Local Regulations for Working in Colusa County Streets	Traffic Control	Colusa County Department of Public Works	Section 8.10.5
Regulations for Excavating and Restoring Streets in Colusa County	Pavement Excavation/ Restoration	Colusa County Department of Public Works	Section 8.10.5

